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A new report of lesser-known endemic grass *Isachne angladei* from Wayanad, Kerala, India

Pichan M Salim¹, Sanilkumar MG^{2*}, Nithya V², Sunil CN²

ABSTRACT

Isachne angladei Fischer (Poaceae) has collected in a recent botanical expedition to Wayanad district, Kerala, India. The species is known to occur in the southeastern part of peninsular (Tamil Nadu) and central India. This is the first record from Kerala and may be treated as an addition to the flora of Kerala.

Keywords: *Isachne angladei*, rare grass, new record, Kerala.

1. INTRODUCTION

The genus *Isachne* R. Br., belonging to the tribe Isachneae of the subfamily Micrairoideae, is widely distributed in the wet areas of the tropical and sub-tropical regions of the world with about 110 species (Kellogg, 2015). However, a revision work by Prakash and Jain, (1984); reported 29 species from India which include 18 endemics. As per recent records, in India, the genus is represented by 34 species (Prabhukumar et al., 2017). There are 14 taxa of *Isachne* reported from the Kerala state (Lekshmi et al., 2022).

During a floristic survey, the authors collected specimens of *Isachne* from Chembra peak (11 32 17.14N and 76 55 71E) and nearby Dumdum hills of Wayanad district Kerala and later identified as *Isachne angladei* Ficher using relevant literature Bor, (1960), Prakash and Jain, (1984), Moulik, (1997), Kabeer and Nair, (2009), Potdar et al., (2012) and herbaria. It is an endemic and rare species, recorded earlier only from Tamil Nadu and Maharashtra states of India. Hence, the reporting of *Isachne angladei* from Wayanad district represents its extended distribution to south west part of Western Ghats (Kerala region) and form a new record to the flora of Kerala. A detailed description, photographs and relevant notes based on fresh collections to facilitate its easy identification.

2. ISACHNE ANGLADEI

C.E.C Fischer in Bull. Misc. Inform. Kew 1932: 323. 1932 & in Gamble, Fl. Pres. Maders 1797. 1934; Bor, Grass. Burma, Ceylon, India, and Pakistan 579. 1960; Ved Prakash and S. K. Jain, Fasc. Fl. India 14: 13. 1984; Bole and Almeida, J. Bombay Nat. Hist. Soc. 84: 384. 1987; V. J. Nair in Henry et al., Fl. Tamil Nadu Anal. 3: 122. 1989; S. Moulik, Grass. Bamb. India 2: 544. 1997; K.T. Mathew in K.M.Mathew, Fl. Palni Hills

3: 1554. 1999; Kabeer and V.J. Nair, Fl. Tamil Nadu – Grasses 326. 2009; Potdar, Salunkhe and Yadav., Grass. Maharashtra 579.2012 (Figure 1).



Figure 1 *Isachne angladei* Fischer: A. Habit; B. A portion of leaf lamina and sheath; C. Inflorescence; D. A portion of inflorescence; E. Single spikelet with pedicel; F. Lower and upper florets; G. Lower glume abaxial view; H. Upper glume abaxial view; I. Lower lemma abaxial view; J. Lower floret showing lower palea and rachilla; K. Upper lemma abaxial view; L. Upper palea, adaxial view; M. Stamens; N. Pistil.

Perennial climbing or straggling herbs. Culms wiry, bamboo-like, 0.5 – 3 m long, up to 3 mm across, profusely branched, glabrous, striate; nodes glabrous. Leaf blade 2 – 16 x 0.12 – 0.8 cm, linear or linear-lanceolate, cuneate at base, margins slightly cartilaginous, scaberulous, acuminate at the apex, glabrous or with sparsely bulbous based hairy, abaxially 5 – 7- nerved, midrib prominent, raised below; leaf sheaths 2 – 4.5 cm long, striate, sparsely ciliate along margins otherwise glabrous, apex with few long bristles; ligule a coriaceous rim with hairy apex. Panicle 4 – 15 x 2 – 10 cm, pyramidal; branches up to 5 cm long, spreading, capillary. Spikelet 2 – 2.4 x 1.4 – 1.6 mm, obovate, obtuse at apex; pedicels 1 – 1.6 mm long, glandular.

Lower glume 2.2 – 2.4 x 1.2 – 1.4 mm, ovate-elliptic, acute at apex, 7 – nerved, greenish with hyaline incurved margins, membranous, glabrous except few bristles along the marginal nerves. Upper glume similar to lower one. Florets 2; similar, bisexual, shorter than glumes. Lower lemma 1.7 – 1.9 x 0.8 – 1 mm, elliptic, plano-convex, margins incurved, obtuse at apex, subcoriaceous, puberulous. Lower palea 1.6 – 1.8 x 0.6 – 0.8 mm, ovate – elliptic, margins incurved, obtuse at apex, subcoriaceous, 2 – keeled, glabrous. Upper lemma 1.5 – 1.7 x 0.6 – 0.8 mm, ovate – elliptic, plano-convex, margins incurved, obtuse at apex, subcoriaceous, sparsely puberulous. Upper palea ca. 1.5 x 0.8 mm, ovate-elliptic, margins incurved, obtuse at apex, subcoriaceous, 2- keeled, glabrous. Stamens 3; anthers yellow. Stigmas plumose, purplish.

Flowering & Fruiting

August – January.

Habitat

In grasslands along bushes.

Distribution

India: Maharashtra, Tamil Nadu

Specimen examined

India, Kerala, Wayanad district, Dumdum hills, 1500 m, 29- 12- 2022, C.N.Sunil & Salim Pichan 9341(SNMH!); Chembra Peak ca. 1900m, 16-10- 2020, C.N.Sunil & Salim Pichan 9363(SNMH!).

3. CONCLUSION

Isachne angladei distinguished from other *Isachne* species by its wiry, bamboo-like culms which climb over the branches of shrubs and on rocks. This rare and endemic grass known only from Palni and Anaimalai hills of Tamil Nadu. It was also collected from Satara in Maharashtra in 1987 by Bole and Almeida. This report of *Isachne angladei* would be a new species addition to the flora of Kerala, India.

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Author Contributions

Pichan M Salim: Conceptualization (equal); Data curation (equal); Formal analysis (equal); Investigation (equal); Methodology (equal); Validation (equal); (equal); Writing – original draft (equal)

Malayil Gopalan Sanilkumar: Data curation (equal); Writing – review and editing (equal). Vadassery Madanan Nithya: Data curation (equal); Writing – review and editing (equal).

Chandrasseril Narayanan Sunil: Conceptualization (equal); Data curation (equal); Formal analysis (equal); Investigation (equal); Methodology (equal); Project administration (equal); Supervision (equal); Validation (equal); Visualization (equal); Writing – original draft (equal).

Ethical approval

A new report of lesser known endemic grass *Isachne angladei* from Wayanad, Kerala, India, is depicted in this study. The ethical guidelines for plants & plant materials are followed in the study for sample collection & identification.

Informed consent

Not applicable.

Conflicts of interests:

The authors hereby declare that there is no potential conflict of interests

Funding:

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Data and materials availability

All data associated with this study are present in the paper.

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